REMARKS

Claims 1-11 are presented for further examination, with claims 1 and 11 being independent.

Initially, the undersigned would like to thank Examiner Ahmed for the courtesies extended during the interview conducted on July 13, 2009, during which differences between the prior art and the present claims were discussed. In particular, Examiner Ahmed acknowledged that U.S. Patent No. 6,663,715 ("Yuda") fails to disclose a plasma excitation gas supply port for supplying plasma excitation gas from a lower side toward a central portion of a region on the high frequency wave supply unit side, as recited in independent claim 1.

The rejection of claims 1-11 over JP 10-022279 ("Fukuyama") in view of Yuda is respectfully traversed. Reconsideration and withdrawal of the rejections are respectfully requested.

Independent claim 1 recites a plasma film forming apparatus comprising, *inter alia,* a plasma excitation gas supply port for supplying a plasma excitation gas at least from a lower side toward a central portion of a region on the high frequency wave supply unit side. Similarly, independent claim 11 recites a plasma film forming method comprising, inter alia, supplying a plasma excitation gas at least from a lateral side and a lower side to a central portion of a plasma generation region.

None of Yuda, Fukuyama, or the combination thereof discloses a plasma film forming apparatus comprising, *inter alia,* a plasma excitation gas supply port for supplying a plasma excitation gas at least from ***a lower side*** toward ***a central portion*** of a region on the high frequency wave supply unit side, as recited in independent claim 1. Similarly, none of Yuda, Fukuyama, or the combination thereof discloses a plasma film forming method comprising, *inter alia,* supplying a plasma excitation gas at least from a lateral side and ***a lower side*** to ***a central portion*** of a plasma generation region, as recited in independent claim 11.

Moreover, the plasma film forming apparatus of independent claim 1 comprises, *inter alia*, ***a flat-plate structure*** formed with an opening for allowing ***plasma*** generated in a region on a high frequency wave supply unit side ***to pass*** to a region on a mounting unit side.

In contrast, Yuda discloses that ***a plasma confining electrode (5)*** is interposed between a high frequency applied electrode (2) and a counter electrode (3) ***to confine plasma***. The plasma confining electrode (5) has radical passage holes 13 for allowing ***radicals*** generated in a plasma generation region ***to pass*** to a substrate processing region. (Column 7, Line 61- Column 8, Line 19). The radical passage hole 13 is designed to have a diameter such that it is possible to confide the generated plasma efficiently. (Column 7, Lines 11-21).

Fukuyama also discloses that an electrode (51) has an opening ***to confine plasma and pass radicals***. (Paragraphs [0030] and [0031]). The electrode (51) does ***not*** have an opening to allow ***plasma*** to pass into the mounting region.

Thus, according to Yuda and Fukuyama, plasma is confined in the plasma generation region, and charged particles with high energy may collide against the inside of a chamber and the electrode in the plasma generation region.

In contrast, according to the present claims, plasma passed through the flat-plate structure from the region on the high frequency wave supply unit (diffused plasma with low electron temperature) can dissociate a source gas efficiently in the region on the mounting unit side to form a film. Accordingly, the presently claimed flat-plate structure differs vastly from the electrode of Yuda and Fukuyama.

Further, according to independent claim 1, plasma (diffused plasma) generated in the plasma generation region R1 can pass through a number of opening portions (32) formed in the source gas supply structure (30) to enter the source gas dissociation region R2, and dissociate the source gas (film forming gas) supplied from the source gas supply structure (3) into the source gas dissociation region R2. To make the source gas be dissociated efficiently to avoid over-dissociation, it is required to supply plasma with low electron temperature

to the source gas dissociation region R2 efficiently. Generally, when the electron temperature (energy) of plasma is high, the source gas is over-dissociated; therefore, it is difficult to form a good film. On the other hand, since plasma generated by a microwave (high frequency wave) has low electron temperature (1 to 3 eV) near the substrate, over-dissociation of the source gas will not occur.

In contrast, according to Yuda and Fukuyama, since plasma is generated by electrodes, the electron temperature of plasma is higher than that in the present claims, and plasma damages the substrate. For this reason, in Yuda and Fukuyama, the plasma confining electrode is provided to shield the substrate from plasma particles (ion or electron) expect radicals. Then, the reacting gas (source gas) is to be dissociated by radicals which are neutral particles.

In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #101994.57726US).

Respectfully submitted,

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